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## **'Super bug' bill targets hospitals State measure could dictate fight against deadly bacterium**

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Illinois is poised to become the first state to require hospitals to implement programs combating a dangerous, drug-resistant bacterium that kills thousands of people in the U.S. each year.

Under a bill moving through the legislature, hospitals would be required to test for methicillin-resistant staphylococcus aureus, or MRSA, in all intensive-care and "at-risk" patients, such as those transferred from nursing homes. If it is detected, aggressive measures to prevent transmission would kick in.

MRSA is a potentially virulent bacterium that has developed strong defenses against common antibiotics such as penicillin. People can become infected in community settings such as gyms, but MRSA is most commonly acquired in health-care facilities.

The drug-defying super bug has been spreading rapidly. Nearly 11,000 Illinois hospital patients were infected last year, a 54 percent rise in just three years, according to the Illinois Hospital Association. Nationally, MRSA strikes about 126,000 hospital patients a year and kills at least 5,000 to 17,000.

"More people are infected and die of MRSA each month in hospitals in the U.S. than from severe acute respiratory syndrome [SARS], anthrax, bioterrorism agents [and] avian influenza combined," Dr. William Jarvis, the CDC's former acting director of the hospital infections program, said in written comments to a February hearing in Springfield.

No one disputes that MRSA is a pressing health concern, but the Illinois bill has sparked considerable controversy.

Critics include prominent medical specialists who argue the legislation is too prescriptive and would impair their ability to address emerging crises. Supporters include the Illinois Hospital Association and consumer advocates, who argue that hospitals have done too little to fight MRSA, putting patients' health at risk.

### **Lawmaker support**

Illinois lawmakers have sided strongly with advocates in the first round of votes on proposed legislation. A final vote is expected within the next month.

"Sure, hospitals and doctors don't want to be told what to do," said Jeanine Thomas, who contracted MRSA in 2000 in a Chicago hospital. "But look at how out-of-control MRSA is."

The goal of the Illinois bill is to identify people who are potential reservoirs of infection and to stop them from passing it on. Two percent to 4 percent of people admitted to hospitals carry MRSA in their nose or on their skin without displaying symptoms.

Transmission could occur when a colonized patient rubs her nose before shaking hands with the doctor who comes in for an examination. The doctor could then carry the bacteria to another patient on his hands or on equipment he's handled.

To limit MRSA's spread, patients who test positive would be isolated; everyone entering a patient's room would put on sterilized gowns, gloves and masks; and strict hand-washing regimens would be instituted.

More than 140 studies have shown that the approach, called active surveillance culturing, can reduce MRSA infections in hospitals by more than 70 percent.

Nationally, the strategy is attracting attention. In March, the Department of Veterans Affairs implemented it at more than 150 hospital intensive-care units across the U.S. Several states, including Minnesota, Pennsylvania and New York, are looking at MRSA-control legislation. In January, the Hospital Corp. of America adopted similar MRSA-control measures at 165 hospitals in 20 states.

Dr. Jonathan Perlin, Hospital Corp.'s chief medical officer, said he is confident the effort will pay off by reducing complications that result in expensive patient stays. "Everything we do to eliminate MRSA will eliminate other drug-resistant infections," Perlin said.

Under the Illinois bill, hospitals also would have to report MRSA infections annually to the state Department of Public Health, which would publish statewide data on its Web site. Currently, hospitals do not disclose MRSA infections rates either locally or nationally.

Critics worry, however, that resources devoted to MRSA detection could detract from other important efforts to improve patient safety in hospitals.

### **'Important tool'**

Active surveillance for MRSA is "an important tool I want to be able to use, but I don't want to be told where and when I have to use it," said Dr. Stephen Weber, an infectious disease specialist at the University of Chicago Medical Center.

Instead, Weber argued, hospitals should be free to direct resources toward the most compelling concerns in their institutions. For instance, the University of Chicago is focusing on reducing infections at surgical sites, which will help control MRSA as well as other drug-resistant bacteria, Weber said.

"It's probably not a good idea to legislate a one-size-fits-all approach, because hospitals have different problems," said Dr. Gary Noskin, associate chief medical officer at Northwestern Memorial Hospital. "The best approach is to rely on each institution's expertise."

The Illinois bill's sponsors don't buy it.

"The problem is, the hospitals have said they want to deal with this for at least 20 years and the incidence of MRSA infections keeps rising at an alarming rate," said state Sen. Christine Radogno (R-Lemont).

"These infections don't have to happen. We know what we need to do to prevent them. Hospitals just aren't doing it," said Dr. Barry Farr, an infection-control expert and professor emeritus at the University of Virginia.

Systematic testing and isolation of MRSA-colonized patients isn't common practice in hospitals, although many identify hot spots of infection and address periodic outbreaks.

Patients struck by MRSA and those who have lost loved ones say they lost trust in hospitals long ago.

Dayle Stirn, 59, of Crest Hill broke her leg in 2005 after tripping at a church function. Doctors at a nearby hospital operated, and within a week blood blisters began breaking out around Stirn's surgical wound.

Eventually, Stirn learned she had MRSA and returned to the hospital for a second operation to remove infected tissue. "Can someone tell me, realistically, what I'm facing here?" she remembers asking doctors and nurses. Stirn said she never got a good answer.

Today, after another three surgeries, Stirn can walk only with crutches, a walker or a cane. "I went in there as a 57-year-old woman with no health problems and came out like this," she said.

### **Lost husband**

Loretta Arens of Lansing lost her husband, Austin, to an MRSA infection he acquired in a Chicago hospital after heart surgery in 2003. Within days, the 79-year-old man went from sitting up and talking to lying unresponsive on a respirator.

"It's like a plague, this infection. It ravages your body. Everything shuts down," Arens said, her voice trembling.

"No one would say how he got this infection," she continued, remembering her frustration. "They didn't even want to name it, like it was some kind of secret."

Thomas, the advocate who's been pushing Illinois lawmakers to act, had a similar experience when she contracted MRSA in 2000 after slipping on ice and having ankle surgery.

In terrible pain, with a high fever and a wound that had turned black, Thomas was readmitted to the hospital and almost died.

At no point did doctors tell this former travel executive what kind of infection she had, Thomas said. She figured it out herself when a friend suggested she look into MRSA and later confirmed it by reviewing her medical records.

Over the next year, Thomas had six additional painful surgeries. Once infected with MRSA, people are susceptible to additional bouts of infection.

After launching a support group for MRSA survivors, Thomas turned her attention to educating Illinois lawmakers.

"I figured I survived for a reason," she said.

### **LOCAL HOSPITALS**

#### **Results seen in testing all patients**

Experts at Evanston Northwestern Healthcare knew MRSA was on the rise when they decided to find out what was happening at their own hospitals, but they never expected what they found.

Nasal swabs of every patient at Evanston, Glenbrook and Highland Park Hospitals in 2004 showed that 8.5 percent carried the super bug -- three times the rate reported in the scientific literature.

"Everyone agreed we had to do something," said Dr. Lance Peterson, Evanston Northwestern's director of infectious-disease research.

The hospitals decided on an aggressive strategy: They would test each of the 40,000 patients admitted each year for MRSA and, when positive results were received, put those patients in "contact isolation."

That meant patients would be placed in private rooms or rooms with other MRSA-positive patients and special precautions would be taken. Also, patients who developed symptoms of infection at the hospitals received tests and treatment.

The strategy worked. Evanston Northwestern went from 1,200 cases of patient-to-patient MRSA transmission in 2003 to 80 cases in 2006, and the \$600,000-a-year program saved twice as much as it cost by reducing infections, Peterson said.

MRSA by the numbers	126,000
People in the U.S. hospitalized with MRSA infections every year.	2 million
People in the U.S. who carry MRSA bacteria in their nose or on their skin but do not have symptoms.	5,000 to 17,000
Number of people who die from hospital MRSA infections every year.	64%
Portion of staph infections in hospital intensive-care units caused by MRSA in 2003?	up from 36 percent in 1995

Source: CDC; Dr. Barry Farr, professor emeritus, Univ. of Virginia

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What is MRSA?

Staph bacteria are the primary cause of infections contracted in hospitals. Illinois lawmakers are considering legislation targeting a potentially virulent form of staph?methicillin-resistant staphylococcus aureus (MRSA)--largely acquired in hospitals.

What is it?

MRSA are strains of bacteria that have mutated to become resistant to commonly used antibiotics such as penicillin.

How can I protect myself?

- Clean hands regularly.
- Keep wounds bandaged.
- Avoid contact with other people's wounds or bandages.
- Do not share items such as towels or razors.

What does it look like?

Red or swollen boils, abscesses and skin lesions are common signs of infection.

How is it acquired?

Physical contact with infected patients or contaminated surfaces and medical devices.

Source: CDC; Dr. Barry Farr, professor emeritus, Univ. of Virginia

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